



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/647,935

08/26/2003

Charles W. Norman

2034

3469

28004

7590

09/04/2008

SPRINT

6391 SPRINT PARKWAY

KSOPHT0101-Z2100

OVERLAND PARK, KS 66251-2100

EXAMINER

LI, SHI K

ART UNIT

PAPER NUMBER

2613

MAIL DATE

DELIVERY MODE

09/04/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.



## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthold et al. (U.S. Patent 7,174,096 B2) in view of Koster et al. (U.S. Patent 2004/0001711 A1) and Öberg et al. (U.S. Patent 6,915,075 B1).

Regarding claims 1 and 17, Berthold et al. discloses in FIG. 4 an optical communication system comprising first POP 12, a second POP 14, first physic path 42, second physical 44, working transceiver 22 and protection transceiver 24. It is understood that each of the transceiver 22 and 24 outputs different wavelengths so that they can share common medium via WDM technique. It is also understood that when problem occur to a working transceiver 22, the signal is switched to the protection transceiver 24. Fiber 42 carries signals generated by transceiver 22 and fiber 44 carries signals generated by transceiver 24. Berthold et al. teaches in col. 4, lines 17 that paths 42 and 44 are diverse communication paths. The difference between Berthold et al. and the claimed invention is that Berthold et al. does not teach coordinating the switch-over from the first wavelength to the second wavelength. Koster et al. teaches in FIG. 1, FIG. 2 and FIG. 3 ring protection, end-to-end protection and segment protection. Koster et al. teaches in paragraph [0063], claims 3 and 4 to use a signaling algorithm to coordinate a switch over. One of ordinary skill in the art would have been motivated to combine the teaching of

Art Unit: 2613

Koster et al. with the optical communication system of Berthold et al. because a signaling algorithm speeds up the switching process and provides smooth and systematic switch over. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made use a signaling algorithm to coordinate switch over, as taught by Koster et al., in the optical communication system of Berthold et al. because a signaling algorithm speeds up the switching process and provides smooth and systematic switch over.

The combination of Berthold et al. and Koster et al. still fails to teach detecting problem at the user system. Öberg et al. teaches in FIG. 2, FIG. 3 and col. 5, line 54-col. 6, line 67 that problem can occur at various places such as the transmitter, the transponder and the receiver and includes power detector 27 in the transponder and demultiplexer and signal detector 29 for detecting failure of any wavelength channels. One of ordinary skill in the art would have been motivated to combine the teaching of Öberg et al. with the modified communication system of Berthold et al. and Koster et al. because failure can occur at any place. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to detect failure at the first POP or the second POP, as taught by Öberg et al., in the modified communication system of Berthold et al. and Koster et al. because failure can occur at any place.

Regarding claims 4 and 20, Öberg et al. teaches in FIG. 2 power detector 27 for detecting failure in the first POP.

Regarding claims 5 and 21, Öberg et al. teaches in FIG. 2 power detector 33 for detecting failure in the second POP.

Regarding claims 11 and 27, Berthold et al. teaches in FIG. 4 switch 26.

Art Unit: 2613

Regarding claims 12 and 28, Öberg et al. teaches in FIG. 2 power detector 27 for detecting failure in the first POP.

Regarding claims 13 and 29, Berthold et al. teaches in FIG. 4 WDM system 60.

Regarding claims 15 and 31, Berthold et al. teaches in col. 4, line 66 that the network element may be SONET equipment.

3. Claims 2-3, 10, 18-19 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthold et al., Koster et al. and Öberg et al. as applied to claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31 above, and further in view of Way (U.S. Patent 7,092,642 B2).

Berthold et al., Koster et al. and Öberg et al. have been discussed above in regard to claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31. Regarding claims 2 and 18, the difference between Berthold et al., Koster et al. and Öberg et al. and the claimed invention is that Berthold et al., Koster et al. and Öberg et al. do not teach the first user communication from the first user system over the first optical wavelength. Way teaches in FIG. 1 a WDM system. Way teaches in col. 4, lines 40-45 that the optical signal can be connected to the WDM without the transponder in which case, the signal received from the first user would have the first optical wavelength. One of ordinary skill in the art would have combined the teaching of Way with the modified optical communication system of Berthold et al., Koster et al. and Öberg et al. because the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to receive user signal at the same wavelength as the working wavelength, as taught by Way, in the modified optical communication system of Berthold et al.,

Art Unit: 2613

Koster et al. and Öberg et al. because the combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

Regarding claims 3 and 19, the transceiver 32 and 34 is capable of generating different wavelengths. It is also expected in the art that the wavelength used by the first user system is the same as that used by the second user system.

Regarding claims 10 and 26, Berthold et al. teaches in col. 2, lines 53-54 that it is understood that bi-directional communication may exist between the network elements. Therefore, either Berthold et al. teaches a second user communications from second user system to first user system with similar architecture as illustrated in FIG. 4, or it would have be obvious to one of ordinary skill in the art to duplicate the architecture of FIG. 4 to provide bi-directional communications based on the suggestion of Berthold et al.

4. Claims 6 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthold et al., Koster et al. and Öberg et al. as applied to claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31 above, and further in view of de Boer et al. (U.S. Patent 6,917,759 B2).

Berthold et al., Koster et al. and Öberg et al. have been discussed above in regard to claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31. The difference between Berthold et al. and Koster et al. and the claimed invention is that Berthold et al., Koster et al. and Öberg et al. do not teach detecting problem in the optical network. de Boer et al. teaches in FIG. 5 that failure may occur within the optical network and the source network element must be notified of the failure so that path switching can be initiated. One of ordinary skill in the art would have been motivated to combine the teaching of de Boer et al. with the modified communication system of Berthold et al. and Koster et al. because failure can occur at any place. Thus it would have been

Art Unit: 2613

obvious to one of ordinary skill in the art at the time the invention was made to detect failure in the optical network and notify the source for path switching, as taught by de Boer et al., in the modified communication system of Berthold et al., Koster et al. and Öberg et al. because failure can occur at any place.

5. Claims 14, 16, 30 and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Berthold et al., Koster et al. and Öberg et al. as applied to claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31 above, and further in view of Fishman (U.S. Patent 6,122,082).

Berthold et al., Koster et al. and Öberg et al. have been discussed above in regard to claims 1, 4-5, 11-13, 15, 17, 20-21, 27-29 and 31. The difference between Berthold et al. and Koster et al. and the claimed invention is that Berthold et al., Koster et al. and Öberg et al. do not teach detecting problem at the WDM system. Fishman teaches in FIG. 4, FIG. 5 and FIG. 6 photodetectors 72, 74, 610, and 702 for detecting problems. One of ordinary skill in the art would have been motivated to combine the teaching of Fishman with the modified communication system of Berthold et al., Koster et al. and Öberg et al. because failure can occur at any place. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to monitor the WDM system and the SONET equipment, as taught by Fishman, in the modified communication system of Berthold et al., Koster et al. and Öberg et al. because failure can occur at any place.

#### ***Response to Arguments***

6. Applicant's arguments filed 14 May 2008 have been fully considered but they are not persuasive.

Art Unit: 2613

The Applicant argues that “the Examiner asserts that Oberg teaches a power detector in demultiplexer 27 and a signal detector in receive end transponder 29 for detecting failure of any wavelength channels (OA, p. 6, lines 1-3). Demultiplexer 27 and receive end transponder 29 detecting a failure in Oberg are not equivalent to the user detecting a problem and sending control instructions, as required by the limitations of claims 7 and 8 incorporated into claim 1”. However, Öberg et al. also teaches in FIG. 2 signal detector 29 for detecting failure. Signal detection resides in access equipment which is equivalent to user system 291 of FIG. 2 of instant specification.

### *Conclusion*

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.



Art Unit: 2613

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 571 272-3031. The examiner can normally be reached on Monday-Friday (7:30 a.m. - 4:30 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 571 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

skl  
29 August 2008

/Shi K. Li/  
Primary Examiner, Art Unit 2613